

IN THE CLAIMS:

1-18. **(Cancelled)**

19. **(Currently Amended)** An injection moulding tool that improves flow characteristics of injection moulding material being introduced into a mould, the injection moulding tool comprising:

a fixed portion defining an elongate chamber;

a flow path having a longitudinal axis through which a material to be injection moulded passes in use, the flow path passing through a portion of the elongate chamber;

an ultrasonically vibrating probe disposed coaxially within the elongate chamber and at least partially into the flow path at an angle transverse to the longitudinal axis of said flow path so that said probe ~~as to~~ directly contacts ~~contact~~ and vibrates ~~vibrate~~ the material passing through the flow path as the material is being injected.

20. **(Previously Presented)** The injection moulding tool as claimed in claim 19, wherein the injection moulding tool includes a fixed part that is fixed relative to an injection barrel during normal use and a moving part that is adapted to move relative to the fixed part during normal use and wherein the flow path is formed in the fixed part of the injection moulding tool.

21-22. **(Canceled)**

23. **(Previously Presented)** The injection moulding tool as claimed in claim 19, wherein the ultrasonically vibrating probe is mounted on a part of the moulding tool that forms the flow path.

24. **(Previously Presented)** The injection moulding tool as claimed in claim 19, further comprising non-metallic seating means for mounting the ultrasonically vibrating probe within the injection moulding tool, the non-metallic seating means being configured to prevent metal-to-metal contact between the ultrasonically vibrating probe and remaining portions of the injection moulding tool.

25. **(Previously Presented)** The injection moulding tool as claimed in claim 24, wherein the non-metallic seating means are also configured to provide a seal about the ultrasonically vibrating probe.

26. **(Previously Presented)** The injection moulding tool as claimed in claim 19, further including a seal disposed about the ultrasonically vibrating probe at a nodal point on the ultrasonically vibrating probe where little or no vibration occurs.

27. **(Previously Presented)** The injection moulding tool as claimed in claim 26, wherein the seal includes a metallic seal means.

28. **(Canceled)**

29. **(Previously Presented)** The injection moulding tool as claimed claim 19, wherein the ultrasonically vibrating probe includes a sonotrode.

30. **(Previously Presented)** The injection moulding tool as claimed in claim 19, wherein the ultrasonically vibrating probe is configured to operate at a frequency of between 10kHz to 50 kHz.

31. **(Withdrawn)** A method for improving the flow characteristics of an injection moulding material to be injected from an injection barrel of a screw type extruder via a tooling piece including vibration means, comprising the steps of

loading into the barrel of the screw type extruder the injection moulding material;

melting said injection moulding material to force a melt;

forcing said melt from the barrel said melt so that it enters the flow path of said tooling piece; and

vibrating the melt injected into the flow path through direct contact of the material being injected with an ultrasonic vibration means.

32. **(Withdrawn)** A method as claimed in claim 31, wherein the direct contact in the vibrating step occurs at a position between the injection barrel and the tool cavity.